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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/500,446 02/09/00 TACHIBANA

K 057866

EXAMINER

IM22/0821

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2100 Pennsylvania Avenue NW
Washington DC 20037

BAGWELL, M

ART UNIT	PAPER NUMBER
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1711

DATE MAILED:

08/21/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/500,446

Applicant(s)

TACHIBANA ET AL.

Examiner

Melanie D. Bagwell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2-3 and 7-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 2 limits the sealing material of claim 1. However, the language of claim 2 renders the claim indefinite. It is unclear whether the applicant intends to claim a different pressure sensitive adhesive (PSA) (not polycarbonate-containing) as part of the multi-layer PSA layer or as a separate layer on the foamed structure. Likewise, it is unclear whether the applicant intends to claim the placement of the different PSA as on the other side of the foamed structure or on the other side of the polycarbonate-containing adhesive. For the purposes of this Office action, it is the examiner's position to treat the claim as limiting the different PSA to a layer on the opposing side of the foam structure from the polycarbonate-containing PSA.
4. Claim 7 limits the sealing material of claim 6. However, the language of claim 7 renders the claim indefinite. The placement of the base material is unclear by the placement of the phrase "through a base material"; thus, the scope of the claim is unclear. For the purposes of this Office action, it is the examiner's position to interpret the claim as a sealing material having a foamed structure, where polycarbonate-containing PSA and base material layers are present on one side of the foamed

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structure (PSA is the outermost layer), and a different PSA is provided on the opposing side of the polycarbonate-containing PSA layer.

5. Claim 8 recites the limitation "the base material" in line 2. There is insufficient antecedent basis for this limitation in the claim. For the purposes of this Office action, it is the examiner's position to treat the claim as dependent on claim 7.

6. Claim 9 recites the limitation "the pressure-sensitive adhesive layer provided on the side opposite to the side" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim. For the purposes of this Office action, it is the examiner's position to treat the claim as dependent on claim 7.

Summary of the Claims

7. Claim 1 is drawn to a waterstop sealing material comprising a foamed structure and a multi-layered PSA layer, where the foamed structure comprises closed cells and the PSA comprises a polymer having straight-chain or branched polycarbonate repeat units. Claim 6 is drawn to a waterstop sealing material comprising a foamed structure and a PSA layer, where the foamed structure comprises closed cells and the PSA comprises a polymer having straight-chain or branched polycarbonate repeat units. Claims 2 and 7 limit the placement of certain layers, claims 3 and 9 limit the different PSA composition, claims 4-5 and 10-11 limit the polycarbonate PSA, and claim 8 limits a base material.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 4-6, and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over NITTO DENKO CORPORATION. NITTO DENKO CORPORATION (EP 0816462A1) can be found on the applicant's Form PTO-1449.

10. NITTO DENKO discloses PSA compositions comprising polymers with polycarbonate structures, where the polycarbonates fit the applicant's general formula (abstract). Polymers having M_w values of 10,000-300,000 include polyesters synthesized using polycarbonate diols with dicarboxylic acids, polyesters synthesized using polycarbonate dicarboxylic acids and diols, and polyurethanes synthesized using polycarbonate diols and diisocyanates (p. 5 lines 40-47). The reference teaches using the PSA compositions in sealing material applications by applying the PSA to a synthetic resin film such as a foamed material (p. 11 lines 34-40), where the adhesive layer may be a multi-layer structure using other PSA compositions for improved adhesion (p. 11 lines 52-56). However, the reference lacks express mention of the cellular structures of the foams used. It is well known in the art that foams comprising closed cells have improved insulation properties since closed cells prevent the passage of air and other media. Since the foams of the invention are used in sealing material applications, it is the examiner's position that it would have been prima facie obvious at

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the time of the invention to choose closed-cell foams for use in the invention to improve the insulation properties of the article.

11. Claims 2-3 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over NITTO DENKO CORPORATION in view of Hartman et al.

12. NITTO DENKO applies as above for a waterstop sealing material. The reference also teaches that adhesives may be included on both sides of the foam substrate (p. 11 lines 52-56) and that the substrates may be composites of metal foils or resin films on synthetic resin films, where foamed materials are given as possible synthetic resin films (p. 11 lines 34-46). The reference notes acrylic or rubber adhesives as conventionally used PSA compositions (p. 12 lines 17-25). However, the reference lacks mention of using a different PSA composition on the side opposite of the polycarbonate-containing PSA layer. Hartman discloses double-sided foam tapes, where acrylic and rubber adhesives are used. Hartman teaches that the use of different adhesive compositions on each side of the foam would be advantageous, since each adhesive layer is generally not adhered to the same substrate (col. 6 lines 38-52). Thus, it would have been prima facie obvious to apply a different PSA to the opposing side of the foam of NITTO DENKO's sealing material to adhere the material to two different substrates.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bagwell whose telephone number is (703) 308-6539. The examiner can normally be reached on M-F 8-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (703) 308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 872-9309.

mdb
August 16, 2001


SAMUEL A. ACQUAH
PRIMARY EXAMINER
GROUP 1200 1700